Claims

What is claimed is:

1. A vapor deposition device for vapor deposition of vertically aligned regions of a substrate, in which an upright melting crucible, having a heater for melting and vaporizing material poured into the melting crucible, is positioned and which has a deflection device for deflecting the vapor flowing vertically out of the melting crucible horizontally toward the substrate,

characterized in that the deflection device is a nozzle pipe, placed from above on the melting crucible and sealable on top, which has a horizontal vapor outlet in its lateral surface, and the nozzle pipe has a heater which is independent of the heater of the melting crucible.

2. The vapor deposition device according to Claim 1,

characterized in that a temperature sensor is provided in each case in the region of the melting crucible and in the region of the nozzle pipe for regulating the output of the heaters of the melting crucible and the nozzle pipe.

3. The vapor deposition device according to Claim 1,

characterized in that the nozzle pipe engages in the melting crucible with a diameter taper on its lower end.

4. The vapor deposition device according to Claim 1,

characterized in that the nozzle pipe has a taper shaped like a truncated cone on its upper end, having a coaxial filling opening, and a plunger, whose height is adjustable, may be introduced into this filling opening from above.

5. The vapor deposition device according Claim 1,

characterized in that the nozzle pipe is enclosed concentrically by multiple reflectors, which have a vapor passage window in the region of the vapor outlet.

6. The vapor deposition device according to Claim 1,

characterized in that the reflectors are externally enclosed by a vaporizer housing, which has cooling pipes on the outside and an exhaust opening in the region of the vapor passage window and the vapor outlet.

7. The vapor deposition device according to Claim 6,

characterized in that the cooling pipes are aligned in a meander shape in the region of the nozzle pipe and have long pipe sections running in the lengthwise direction of the vaporization device, which are alternately connected to one another above and below by a short pipe section in each case.

8. The vapor deposition device according to Claim 6,

characterized in that the cooling pipes lead in a spiral shape around the vaporizer housing in the region of the melting crucible.

9. The vapor deposition device according to Claim 1,

characterized in that the vapor outlet in the nozzle pipe is formed by multiple holes positioned one over another.

10. The vapor deposition device according to Claim 1,

characterized in that the melting crucible and the nozzle pipe are made of graphite.